



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/706,545
Applicant(s) : Robert J. Gulotty Jr. et al.
Filed : November 12, 2003
TC/A.U. : 1621
Examiner : Unknown
Title : OXYHALOGENATION PROCESS USING CATALYST HAVING
POROUS RARE EARTH HALIDE SUPPORT
Docket No. : 61215A
Customer No. 00109

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Jane M. Neitzel

PRINT OR TYPE NAME OF PERSON SIGNING CERTIFICATE

Jane M. Neitzel

SIGNATURE OF PERSON SIGNING CERTIFICATE

February 25, 2004

DATE OF SIGNATURE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to Applicants' duty of disclosure under 37 CFR §1.56, the Examiner's attention is directed to the information identified in the attached Form PTO 1449.

A copy of each cited Foreign Patent Document and Other Disclosure is enclosed herewith, with the following exceptions. Copies of the cited, but unpublished pending US applications are not enclosed, because these applications correspond to published International Applications that are provided herewith.

The Examiner is requested to review each reference and formulate his or her own understanding thereof.

Respectfully submitted,

Marie F. Zuckerman

Marie F. Zuckerman

Registration No. 31,315

Phone: 203-248-3907

P. O. Box 1967
Midland, MI 48641-1967

MFZ/jmn

61215A



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(Use Several Sheets if necessary)

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Unknown

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	2,204,733	June 18, 1940	Miller	23	219	
	3,149,171	Sept. 15, 1964	Arganbright	260	655	
	3,488,398	Jan. 6, 1970	Harpring et al.	260	659	
	3,629,354	Dec. 21, 1971	Beard et al.	260	683.3	
	3,634,330	Jan. 11, 1972	Yerres et al.	252	441	
	3,644,561	Feb. 22, 1972	Beard et al.	260	683.3	
	3,657,367	April 18, 1972	Blake et al.	260	659 A	
	3,658,933	April 25, 1972	Beard et al.	260	683.3	
	3,658,934	April 25, 1972	Beard et al.	260	683.3	
	3,702,311	Nov. 7, 1972	Beard et al.	252	441	
	3,769,362	Oct. 30, 1973	Beard et al.	260	677 XA	
	3,927,131	Dec. 16, 1975	Ward	260	654D	
	3,968,178	July 6, 1976	Obrecht et al.	260	658	
	3,968,200	July 6, 1976	Tsao	423	488	
	4,025,461	May 24, 1997	Croce et al.	252	462	
	4,042,640	Aug. 16, 1977	Tsao	260	659	
	4,046,821	Sept. 6, 1977	Croce et al.	260	654A	
	4,046,823	Sept. 6, 1977	Gordon et al.	260	662 R	
	4,100,211	Jul. 11, 1978	Magistro	260	656 R	
	4,110,251	Aug. 29, 1978	Lauder et al.	252	442	
	4,230,668	Oct. 28, 1980	Sheely et al.	422	140	
	4,300,005	Nov. 10, 1981	Li	570	224	
	4,319,062	March 9, 1982	Boozalis et al.	570	220	

EXAMINER

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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to Applicant.

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		4,323,482	April 6, 1982	Stiles et al.	252	462			
		4,329,525	May 11, 1982	Riegel et al.	570	191			
		4,375,569	Mar. 1, 1983	Kroenke et al.	570	224			
		4,402,942	Sept. 6, 1983	Melin	424	177			
		4,405,500	Sept. 20, 1983	Muller et al.	252	433			
		4,460,669	Jul. 17, 1984	Convers et al.	502	84			
		4,462,970	Jul. 31, 1984	Pastor et al.	423	263			
		4,523,040	Jun. 11, 1985	Olah	568	671			
		4,528,174	Jul. 9, 1985	Schmidhammer et al.	423	488			
		4,529,410	Jul. 16, 1985	Khaladji et al.	51	309			
		4,590,216	May 20, 1986	Dombek	518	700			
		4,727,201	Feb. 23, 1988	Cobb	570	202			
		4,737,594	April 12, 1988	Olah	570	222			
		4,754,088	Jun. 28, 1988	Schmidhammer et al.	570	247			
		4,766,103	Aug. 23, 1988	Cobb	502	217			
		4,769,504	Sept. 6, 1988	Noceti et al.	585	415			
		4,783,564	Nov. 8, 1988	Piotrowski et al.	570	254			
		4,849,562	Jul. 18, 1989	Buhs et al.	570	241			
		4,859,432	Aug. 22, 1989	David et al.	423	21.1			
		4,899,000	Feb. 6, 1990	Stauffer	570	222			
		4,942,697	Jul. 24, 1990	Khaladji et al.	51	283 R			
		4,965,057	Oct. 23, 1990	David et al.	423	263			
		5,008,225	April 16, 1991	Magistro	502	73			
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		5,013,534	May 7, 1991	Dissaux et al.	423	263			
		5,023,070	Jun. 11, 1991	Le Loarer	423	592			
		5,061,670	Oct. 29, 1991	Forquy et al.	585	500			
		5,072,063	Dec. 10, 1991	Langensee	570	236			
		5,087,791	Feb. 11, 1992	Magistro	585	657			
		5,097,083	Mar. 17, 1992	Stauffer	570	241			
		5,099,085	Mar. 24, 1992	Strasser et al.	570	245			
		5,113,027	May 12, 1992	Mainz et al.	570	224			
		5,114,702	May 19, 1992	Pederson et al.	423	639			
		5,137,862	Aug. 11, 1992	Mackrodt et al.	502	303			
		5,178,664	Jan. 12, 1993	Picard	75	300			
		5,179,215	Jan. 12, 1993	Ramachandran et al.	549	262			
		5,210,358	May 11, 1993	Magistro	585	500			
		5,227,549	Jul. 13, 1993	Correia et al.	570	243			
		5,232,889	Aug. 3, 1993	Blanchard et al.	502	263			
		5,262,547	Nov. 16, 1993	Ramachandran et al.	549	262			
		5,352,646	Oct. 4, 1994	Blanchard et al.	502	263			
		5,397,758	Mar. 14, 1995	Bouruetaubertot et al.	502	303			
		5,453,557	Sept. 26, 1996	Harley et al.	585	641			
		5,466,837	Nov. 14, 1995	Ramachandran et al.	549	533			
		5,492,878	Feb. 20, 1996	Fujii et al.	502	304			
		5,496,528	Mar. 5, 1996	David et al.	423	263			
		5,510,546	April 13, 1996	Ito	570	236			
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		5,580,536	Dec. 3, 1996	Yao et al.	423	263			
		5,599,588	Feb. 4, 1997	Poncelet	427	343			
		5,600,042	Feb. 4, 1997	Chen et al.	570	230			
		5,607,890	Mar. 4, 1997	Chen et al.	205	202			
		5,646,304	Jul. 8, 1997	Acharya et al.	549	259			
		5,663,112	Sept. 2, 1997	Ahn et al.	502	304			
		5,663,465	Sept. 2, 1997	Clegg et al.	570	224			
		5,663,472	Sept. 2, 1997	Benson et al.	585	641			
		5,705,728	Jan. 6, 1998	Viswanathan et al.	585	641			
		5,728,905	Mar. 17, 1998	Clegg et al.	570	224			
		5,762,894	Jun. 9, 1998	Takatori et al.	423	263			
		5,763,710	June 9, 1998	Clegg et al.	570	224			
		5,773,383	June 30, 1998	Suciu	502	355			
		5,874,380	Feb. 23, 1999	Chen et al.	502	217			
		5,877,371	Mar. 2, 1999	Chen et al.	585	467			
		5,880,058	Mar. 9, 1998	Moriya et al.	502	302			
		5,883,037	Mar. 16, 1999	Chopin et al.	502	308			
		5,898,014	April 27, 1999	Wu et al.	502	302			
		5,905,177	May 18, 1999	Seo et al.	570	243			
		5,919,727	Jul. 6, 1999	Brezny	502	304			
		5,922,639	Jul. 13, 1999	Alario et al.	502	230			
		5,925,590	Jul. 20, 1999	White et al.	502	302			
		5,935,897	Aug. 10, 1999	Trubenbach et al.	502	527.14			
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		5,935,898	Aug. 10, 1999	Trubenbach et al.	502	527.14	
		5,945,370	Aug. 31, 1999	Yokoi et al.	502	304	
		5,945,573	Aug. 31, 1999	Nappa et al.	570	175	
		5,955,638	Sept. 21, 1999	Schoebrechts et al.	570	232	
		5,969,195	Oct. 19, 1999	Stabel et al.	568	700	
		5,972,827	Oct. 26, 1999	Petit et al.	502	225	
		5,972,830	Oct. 26, 1999	Yoshida et al.	502	304	
		5,994,260	Nov. 30, 1999	Bonneau et al.	502	304	
		6,002,019	Dec. 14, 1999	Tamhankar et al.	549	285	
		6,090,743	Jul. 18, 2000	Chopin et al.	502	302	
		6,136,048	Oct. 24, 2000	Birchem et al.	44	354	
		6,165,931	Dec. 26, 2000	Rao	502	224	
		6,191,329	Feb. 20, 2001	Benje	570	243	
		6,194,345	Feb. 27, 2001	Mangnus et al.	502	224	
		6,228,799	May 8, 2001	Aubert et al.	502	304	
		6,452,058	Sept. 17, 2002	Schweizer et al.	570	223	

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		01/38272	May 31, 2001	PCT				
		01/38273	May 31, 2001	PCT				
		01/38274	May 31, 2001	PCT				
		01/38275	May 31, 2001	PCT				
		01/42176	June 14, 2001	PCT				
		02/094749	Nov. 28, 2002	PCT				

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		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
		02/094750 A1	Nov. 28, 2002	PCT			
		02/094751 A3	Nov. 28, 2002	PCT			
		02/094752	Nov. 28, 2002	PCT			
		1 039 369	Aug. 17, 1966	Great Britain			
		1 040 962	Sept. 1, 1966	Great Britain			
		1 062 171	March 15, 1967	Great Britain			
		1 141 369	Jan. 29, 1969	Great Britain	C07C	19/02	
		1 213 202	Nov. 25, 1970	Great Britain	C07C	21/06	
		1 343 724	Jan. 16, 1874	Great Britain			
		1 373 296	Nov. 6, 1974	Great Britain	C07C	17/10	
		1 475 358	June 1, 1977	Great Britain	C07C	17/15	
		1 492 945	Nov. 23, 1977	Great Britain			
		2 095 242	Sept. 29, 1982	Great Britain			
		2 101 596	Jan. 19, 1993	Great Britain			
		237 058 A3	July 2, 1986	Germany (English Abstract)			X
		0 162 457 B1	July 26, 1989	Europe	C07C	17/34	
		0 372 183 B1	Jan. 1, 1997	Europe	C07C	11/107	
		0 667 845 B1	Jan. 14, 1998	Europe	C07C	17/154	
		0 720 975 A1	July 10, 1996	Europe	C07C	17/154	
		1 594 693	July 17, 1970	France (English Abstract)			X
OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)							
		Au, C. T. et al., "The oxidative coupling of methane over BaCO ₃ /LaOCl catalysts", APPLIED CATALYSIS A: GENERAL, Vol. 159 (1997) pp. 133 -145					
		Chanaud, P. et al., "Catalytic Membrane Reactor for Oxidative Coupling of Methane. Part 1: Preparation and Characterization of LaOCl Membranes", CATALYSIS TODAY, Vol. 25 (1995) pp. 225-230					
		Chanaud, P. et al., "Study of Lanthanum-based Colloidal Sols Formation", JOURNAL OF MATERIALS SCIENCE, Vol. 29 (1994) pp. 4244-4251					
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		Conner, Jr., Wm. Curtis et al., "The Oxyhydrochlorination of Methane on Fumed Silica-Based Cu, K, La Catalysts: III Bulk & Surface Analysis", APPLIED CATALYSIS, Vol. 11 (1984) pp. 59-71		
		Conner, Jr., Wm. C. et al., "The Oxyhydrochlorination of Methane on Fumed Silica-Based Cu, K, La Catalysts: II Gas Phase Stoichiometry", APPLIED CATALYSIS, Vol. 11 (1984) pp. 49-58		
		Fells, Ian, "The Kinetics of the Hydrolysis of the Chlorinate Methanes", FUEL SOCIETY JOURNAL, Vol. 10 (1959) pp. 26-35		
		Fortini, E. M. et al., "Stabilization of the Active Phase by Interaction with the Support in CuCl ₂ Oxychlorination Catalysts", JOURNAL OF CATALYSIS, Vol. 99 (1986) pp. 12-18		
		Lance, E. T. et al., "Preparation, Phase Equilibria, and Crystal Chemistry of Lanthanum, Praseodymium, and Neodymium Hydroxide Chlorides", JOURNAL OF SOLID STATE CHEMISTRY, Vol. 17 (1976) pp. 55-60		
		Lin, S. et al., "Oxidative Dehydrogenation of Ethane over Lanthanum-Substituted Layered Complex Bismuth Chloride Oxide Catalysts", THE CHEMICAL SOCIETY OF JAPAN, CHEMISTRY LETTERS (1997) pp. 901-902		
		McDonald, Mark A. et al., "Effects of Pressure on the Oxyhydrochlorination of Methane", CHEMICAL ENGINEERING SCIENCE, Vol. 49, No. 24A (1994) pp. 4627-4637		
		Miyake, Takanori et al., "Screening of Metal Chloride Catalysts for Oxychlorination of Propene", Applied Catalysis A: General, Vol. 121, No. 1 (1995) pp. L13-L17		
		Noceti, Richard P. et al., "Advances in Methane Oxyhydrochlorination Catalysts", PREPRINTS, AMERICAN CHEMICAL SOCIETY, Washington, DC (1992) pp. 281-283		
		Olah, George A. et al., "Selective Monohalogenation of Methane over Supported Acid or Platinum Metal Catalysts and Hydrolysis of Methyl Halides over γ-Alumina-Supported Metal Oxide/Hydroxide Catalysts. A Feasible Path for the Oxidative Conversion of Methane into Methyl Alcohol/Dimethyl Ether", AMERICAN CHEMICAL SOCIETY, Vol. 107, No. 24 (1985) pp. 7097-7105		
		Patent Abstracts of Japan, Vol. 004, No. 190 (26 December 1980) (Corresponds to JP 55 130923)		
		Pieters, W.J.M. et al., "The Oxyhydrochlorination of Methane on Fumed Silica - Based Cu ⁺ , K, La Catalysts: I. Catalyst Synthesis", APPLIED CATALYSIS, Vol. 11 (1984) pp. 35-48		
		Poznanski, J., "A Study of the Chlorination of Lanthanum and Neodymium Oxides", MATERIALS SCIENCE, XVIII (1992) pp. 99-104		
		Weckhuysen, Bert M. et al., "Destructive Absorption of Carbon Tetrachloride on Lanthanum and Cerium Oxides", PHYS. CHEM. CHEM. PHYS., Vol. 1 (1999) pp. 3157-3162		
		Weissermel, K. et al., INDUSTRIAL ORGANIC CHEMISTRY, 2 nd Edition, VCH, Weinheim (1993) pp. 168-175		
		Derwent Publication, AN 1978-85275A, "Allyl chloride prepn. from propylene, hydrogen chloride and oxygen - using catalyst comprising chloride of samarium, chromium, manganese or praseodymium", Research Disclosure RD-175041, Anonymous		
		"Process for Vinyl Chloride Manufacture from Ethane and Ethylene with Secondary Reactive Consumption of Reactor Effluent HCl", filed in the United States Receiving Office on May 14, 2002, USSN 10/130,105, Applicant: Mark E. Jones et al. (Corresponds to WO 01/38272)		
		"Production of Vinyl Halide from Single Carbon Feedstocks", filed in the United States Receiving Office on Nov. 18, 2003, USSN 10/130,105, Applicant: Mark E. Jones et al. (Corresponds to WO 02/09749)		
		"Process for Vinyl Chloride Manufacture from Ethane and Ethylene with Air Feed and Alternative HCl Processing", filed in the United States Receiving Office on Nov. 11, 2003, USSN 10/477,502, Applicant: William D. Clarke et al. (Corresponds to WO 02/094752)		
		"Dehydrogenation of Halogenated Alkanes Using Rare Earth Halide or Oxyhalide Catalyst", filed in the United States Receiving Office on May 14, 2002, USSN 10/130,106, Applicant: Larry N. Ito et al. (Corresponds to WO 01/38275)		
		"Oxidative Halogenation and Optional Dehydrogenation of C3+ Hydrocarbons", filed in the United States Receiving Office on Nov. 18, 2003, USSN 10/478,265, Applicant: Albert E. Schweizer et al. (Corresponds to WO 02/094750)		
		"A Process for the Conversion of Ethylene to Vinyl Chloride, and Novel Catalyst Compositions Useful for Such Process", filed in the United States Receiving Office on May 14, 2002, USSN 10/130,104, Applicant: Mark E. Jones et al. (Corresponds to WO 01/38273)		
		"Process for Vinyl Chloride Manufacture From Ethane and Ethylene with Partial HCl Recovery From Reactor Effluent", filed in the United States Receiving Office on May 14, 2002, USSN 10/130,102, Applicant: John P. Henley et al. (Corresponds to WO 01/42176)		
		"Process for Vinyl Chloride Manufacture From Ethane and Ethylene with Partial HCl Recovery From Reactor Effluent", filed in the United States Receiving Office on May 14, 2002, USSN 10/130,103, Applicant: Daniel A. Hickman et al. (Corresponds to WO 01/38274)		
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